2014

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David P. Paul III
Monmouth University

Rodrigo Carmago
Marshall University

Thaisa Carmago
Marshall University

Stacie Deslich
Marshall University, deslich1@marshall.edu

Alberto Coustasse
Marshall University, coustassehen@marshall.edu

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David P. Paul, III, Monmouth University
Rodrigo Camargo, Marshall University
Thaisa Camargo, Marshall University
Stacie Deslich, Marshall University
Alberto Coutasse, Marshall University

ABSTRACT

Accountable care organizations are groups of providers who agree to accept the responsibility for elevating the health status of a defined group of patients, with the goal of enabling people to take charge of their health and enroll in shared decision-making with providers. The large initial investment required (estimated at $1.8 million) to develop an ACO implies that the participation of large health care organizations, especially hospitals and health systems, is required for success. Findings of the study suggest that ACOs based in a larger hospital organizations are more likely to meet CMS criteria for formation because of financial and structural assets of those entities

INTRODUCTION

Comparisons of health outcomes between the United States and other countries are frequently made, in both the academic literature (Davis et al., 2007), professional literature (Medical Mutual, 2013) and lay press (Romasco, 2013). Based upon these comparisons, many think that the U. S. healthcare system costs too much (Peterson and Burton, 2007) and is unsustainable (Fischer et al., 2009a; Schieber et al., 2009) due to virtually continuous increase in healthcare costs (Dove, Weaver and Lewin, 2009; Stephens and Ledlow, 2010). In 2009, the U.S. spent $8,086 per person on healthcare, and this cost has been steadily increasing for well over 30 years (Cogan, 2011; Lamb, 1991). Cogan (2011) noted that the U.S. spends more on healthcare than any other developed country, but Americans do not have better health outcomes. Fischer et al. (2009a) have pointed out that about 50 million Americans do not have healthcare insurance, and some of those that do have insurance have coverage which is inadequate.

In keeping with these deficiencies, Berwick, Nolan and Whittington (2008) recommended that true healthcare reform in the U.S. would require three changes: improving health at the population level instead of the individual level, improving the process of healthcare delivery, and reducing the per capita cost of providing healthcare. To move toward achieving these three changes, in 2010 U.S. Congress passed the Patient Protection and Affordable Care Act (PPACA) which was designed to strengthen the American healthcare system, by expanding the primary care workforce and reorganizing the current delivery system through organizational and payment reforms (Friedberg, Hussey and Schneider, 2010).

The concept of ACOs was born at the Dartmouth Institute for Health Policy and Clinical Practice (Goldsmith, 2011) and the main idea was to implement ACOs at the beginning of 2012 with Medicare Shared Savings Program (MSSP) as an alternative approach for providers to be paid under the program, rewarding organizations for diminishing Medicare spending growth in individual hospital service areas (Fischer et al., 2007).

ACOs consist of federally certified multispecialty groups of physicians, hospitals, and other healthcare providers which have assumed responsibility for the care of a clearly defined group of Medicare patients on a fee-for-service basis (Berwick, 2011; Relman, 2011). The ACO's goals are for people to become more responsible for their health by engaging in shared decision making with providers, which will increase patient satisfaction (DeVore and Champion, 2011), and to increase quality and efficiency (Kocher and Sahni, 2010), while simultaneously reducing (or at least slowing the rate of increase of) overall Medicare costs (Shortell, Gillies and Wu, 2010).

Although many different kinds of providers have met CMS criteria for being an ACO, they have all been classified by the existing structure of the organization. Four major types, or structures, of ACOs have been defined: Independent Practice Associations (IPAs), multi-specialty group practices, Integrated Delivery Systems (IDSs), and Physician-Hospital Organizations (PHOs) have been identified as the four categories of ACOs (Shortell, Casalino and Fischer, 2010). IPAs are groups of physicians who own a practice and are able to enter into contracts with other organizations (e.g., managed care organizations). Multi-specialty group practices are similar to IPAs, but have more primary care physicians (PCPs) as their members. For example, a multi-specialty group may include PCPs, allergists, internists, dermatologists, and several other specialty practitioners. Both IPAs and multi-specialty groups allow the physician group members some leverage in contract negotiations (Shortell et al., 2009). IDSs consist of groups formed by physicians and hospitals, and provide a wide range of healthcare such as inpatient care, outpatient care, and primary care. PHOs operate much like integrated delivery systems, only the relationship is defined by the agreement between the physicians and hospital. These groups have been formed in response to the oligopsonistic environment (a market with a large number of sellers and a small number of buyers) created by the managed care organizations and other payers in the U. S. healthcare system (Bader, 2009). IPAs and multi-specialty group practices (i.e., physician groups not explicitly including one or more hospitals) may have met the criteria to be classified as an ACO, however, these organizations usually have significant difficulty finding the capital necessary to cover start- up costs, and thus they have been dependent on hospitals to pay for the construction and implementation of the ACO. Therefore, as a practical matter, a formal relationship between hospitals and physicians is required for establishment of a successful ACO.

ACOs are structured via three main principles: payment reform, performance measurement, and delivery system changes (Lee et al., 2010). The current payment method in Medicare is based on fee-for-service, where a payment is made for each instance of health care service provided. This has led to an inefficient and unsustainable system (King, 2011; Moffit and Senger, 2012). The PPACA has proposed a shared savings program for ACOs, where the ACOs would share savings or savings and losses, depending of the model contracted with CMS. Two different models have been proposed: a one-sided model where ACOs and CMS would share savings in a 50%-50% model but all the losses are absorbed by CMS and a two-sided model where both savings and losses are shared between CMS and ACOs, with a distribution of 60% for ACOs and 40% for CMS (DHHS, 2011).

The second principle of ACOs is performance measurement. Improvement of performance has included quality goals, optimizing patient satisfaction across coordinated care, and constantly elevated outcomes (DeVore and Champion, 2011). The healthcare delivery system would move from a fragmented system toward care coordination, with integrated primary care practices and specialties, reducing unnecessary specialty referrals and avoidable complications (Kocher, Emanuel and DeParle, 2010).

Finally, ACOs must make some changes in how they deliver healthcare. These changes must meet certain criteria (Merlis, 2010), including a three-year participation contract; a formal legal structure, and primary care physicians (or groups of PCPs) who are responsible for at least 5,000 patients. A list of primary care and subspecialty physicians who were enrolled for the CMS and contracted with care groups of specialty physicians outside the ACOs is also required. Fink and Hartzell (2010) included as additional criteria for building new ACO networks: a defined leadership structure for consolidated decision making and a

determined process for increased evidence-based medicine, reporting on quality, cost reduction measures, and coordinated care. According to these authors, leadership structure has the expectation of bringing accountability, transparency, and efficiency to the American healthcare system.

As of August 2012, 227 ACOs have been formed and implemented across the U.S. (Fischer et al., 2012). CMS reported it currently has 3 different ACO programs, the Medicare Shared Savings Program, with 115 organizations involved, the Pioneer ACO program, with 32 organizations, and the Advance Payment ACO, with 20 smaller organizations. Aside from these federally organized and implemented ACOs, several private provider organizations have formed ACOs as well (Fischer et al., 2012).

The purpose of this research study was to analyze the structure and financial advantages of hospital ACOs to determine if hospital-based ACOs are in a better position to meet CMS criteria in generating better quality of care and reduced costs than smaller ACO organizations.

METHODOLOGY

The methodology for this qualitative study was a literature research and review of case studies. The electronic databases of PubMed, Academic Search Premier, and ProQuest were search for the term "Hospital ACOs" and "Structure" or "Financial Advantage". Reputable websites of the American Medical Association and the American Hospital Association were also mined. Citations and abstracts identified by the search were also assessed in order to identify relevant articles. A total of 51 sources were reviewed and 33 selected for this research, 11 of which were utilized in the results. The search strategy was limited to sources published within the last 10 years in the English language. The literature search was conducted by RC, TC, and SD and validated by AC for this research project. Subsequently, all sources were again checked by DP, who cross-referenced and updated the references.

RESULTS

The participants of ACO have been hospitals, critical access hospitals, specialists, and other providers, since these organizations have met the criteria imposed by CMS (Longworth, 2011). This author has mentioned that small organizations would have been less likely to generate all basic levels of care for their enrollees than larger ones because of the criteria constraints; specifically, hospitals would have had advantages in meeting the CMS criteria to become an ACO. Requirements such as written performance standards for quality efficiency, evidence-based guidelines, tools to collect, evaluate, and share data to influence decision-making at the point of care, and description of how shared savings will be used to further improve care could have been limitations for a small organization that didn't have background on these demands (Longworth, 2011; Shields et al., 2011). In addition, Fischer et al. (2009b) have stated that hospitals would be more likely to control the ACO's contracting process for two reasons: (1) the generally avoidable Medicare costs were hospital-based; and (2) in several communities, hospitals were the main organized care delivery entity able to perform or execute the model.

The costs with investment in the first-year of operation as ACO have differed depending on the size of the healthcare organization. CMS has estimated that startup and first year costs for an ACO would be about $1.8 million (Branin et al., 2011; Roach, 2011), with annual savings for the first 3 years of operation to be $470 million (ACP, 2011), but other estimates of ACO startup costs (Moore and Coddington, 2011) range between $5.3 million and $12 million, depending on ACO size, with ongoing annual expenses between $6.3 million and $14.1 million. The disparity between the expected initial financial investment and ongoing annual costs associated with establishment of an ACO would certainly impact organizations' assessment of business risk for an ACO.

Regardless of the type of organization that adopts the ACO model, Gabbay et al., (2011) have mentioned that IDS models and care coordination have presented increased cost-savings while improving quality of care. The authors have found cost-savings in the patient-centered medical homes model when hospital admissions and visits to the emergency department were reduced. Some research has shown relevant cost-savings: in 2010, the Group Health Cooperative of Puget Sound reduced total costs by $10 per member per month (from $498 to $488), with a 16% decrease in hospital admissions and a 29% reduction in emergency departments visits (Bodenheimer, 2011). Another case examined by this scholar was the 2011 Blue Cross Blue Shield of South Carolina implementation of ACOs: the patient-centered medical group had a 36% decrease in length of stay, 12.4% fewer emergency department visits, and 6.5% decrease in total medical and pharmacy expenses. Bodengeimer (2011) also reported that Johns Hopkins Guided Care program showed 24% decrease in hospital length of stay, 15% less emergency department visits, and 37% fewer days in a skilled nursing facility (See Table 1).

--- insert Table 1 about here ---

The formation and implementation of ACO's is relatively new, however, studies have examined both financial and patient outcomes (Bodenheimer, 2011; Milford and Ferris, 2012). Such studies have had varied outcomes in measuring financial and health benefits to the implementation of ACOs, as well as measurements of the benefits in relation to the size and structure of the ACO. In general, larger, hospital based IDSs or physician hospital organizations have had better outcomes compared to smaller independent practice associations or even multispecialty group practices (Ballard, 2012).

Blue Cross Blue Shield of Massachusetts implemented a payment system paralleling an ACO payment organization in 2009, identified as an alternative quality contract, in which integrated delivery systems were measured for performance and financial benefit. While all healthcare costs rose over a three year time period, the participants of the payment system had a smaller rise in costs, around $53 versus a raise of $69 for nonparticipants (Song et al., 2011).

Similarly, Partners HealthCare in Boston has shown positive results of the formation and implementation of ACO's. This system includes Massachusetts General Hospital, Brigham and Women's Hospital and over 6000 physicians organized into an integrated delivery system. A study of the outcomes of this organization has shown, as of 2009, significant savings, as well as an increase in positive outcomes. A savings of 7% was identified, as well as a 4% decrease in mortality rates, and a 20% drop in admissions to the hospitals (Milford and Ferris, 2012).

An examination of the performance of Genesys Physician Hospital Organization in Flint, Michigan and Austin, Texas-based Seton Health Alliance, both physician-hospital based organizations, projected positive outcomes for both systems with the implementation of ACO organization. In 2009, both organizations met criteria to form ACOs and could be expected to achieve improved health outcomes, decreasing costs, and improvement of patient satisfaction as identified by this prospective study (Anderson et al., 2012).

Cigna Health, based in Connecticut, has implemented ACOs in several states, including Arizona, New Hampshire, and Texas. These ACOs, in addition to meeting all criteria for ACO implementation, also have begun utilizing registered nurses as care coordinators in an effort to improve patient outcomes and control costs (Salmon et al., 2012). A recent examination of these ACOs revealed positive results of the implementation and utilization of the larger organization ACO. The Arizona based ACO had total costs that were 27.04 less than the per member per month national average, the New Hampshire organization had per member per month costs that were 1.78 less than projected, and the Texas ACO per member per month costs were 6.56 less than projected (Salmon et al., 2012).

DISCUSSION

The formation and implementation of ACOs has the ability to affect significant changes in the U.S. healthcare system. Presumably, the changes will be positive, such as decreasing the growing financial burden of providing healthcare and increasing positive outcomes for patients. An ACO that is based in a larger hospital organization is more readily able to meet CMS requirements for formation due to the financial and organizational assets of those entities.

While larger ACOs have the ability to meet the requirements to form and provide services, some barriers to ACO formation have been identified. Tallia and Howard (2012) examined the Robert Wood Johnson Medical School at the University of Medicine and Dentistry in New Jersey and identified four significant barriers to ACO formation and implementation. Providers involved in the ACO experienced difficulty in collaborating and cooperating to achieve ACO status, initial financing to form the ACO was difficult to gain, federal antitrust laws prevented the participation of some providers, and, as ACOs are somewhat reminiscent of the health maintenance organizations of the 1990's, many providers were doubtful about the positive effects of ACO formation and implementation, thus the providers did not want to participate (Tallia and Howard, 2012).

The practical implications of this research are that, with the advent of new healthcare policies and legislation, providers will be held more accountable for patient outcomes and providing preventive healthcare. Forming ACOs is one way providers will be able to work together to meet the needs of patients, while meeting state and federal standards for financial and clinical performance. Providers need to be motivated and willing to work together to form and utilize ACOs in an effort to meet CMS standards. Further, concerns about ACOs repeating earlier health maintenance organization failures can be mitigated by ensuring providers meet not only structural and financial standards, but the more stringent quality standards for ACO formation. Hospital-based organizations may have structural and financial advantages in meeting CMS criteria for ACO formation.

This study has some limitations. ACOs are a new way to organize providers and to reach a patient population, as well as bill for services. Current research is limited to the small number of providers that have been able to actually organize into ACOs and begin utilizing the structure for providing care, and the even more limited data available regarding the success (or lack thereof) of these early ACOs. The study was also limited to an examination of the size of the ACOs and the effect it has on financial outcomes, while other variables, such as the age of the ACO or the commitment of the providers to the ACO may have an effect on the financial viability of the organization. Finally, researchers' and publication bias cannot be ruled out.

CONCLUSION

The findings of the current study suggest that ACOs based in a larger hospital organizations are more likely to meet CMS criteria for formation because of financial and structural assets of those entities. In addition, ACOs could provide more coordination and preventive services, which in turn, could contribute to a decrease in healthcare spending.

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Table 1: Financial and Patient Outcomes of Accountable Care Organization Utilization and Implementation

Author	Location	Type of ACO	Financial Outcomes	Patient Outcomes
Milford and Ferris, 2012	Boston, Massachusetts	Integrated Delivery System	7% savings with the implementation of ACO	20% decrease in inpatient admissions, 4% decrease in mortality
Salmon et al., 2012	Arizona, New Hampshire, and Texas	Integrated Delivery System, Physician-hospital Organization	Per member per month costs were $27.04 less than the national average, $1.78 and $6.56 less than projected	Not assessed
Song et al., 2011	Massachusetts	Integrated Delivery System	Participants had a $53 raise in costs, nonparticipants had a $69 raise in costs	Not assessed
Bodenheimer, 2011	Puget Sound, Boston, and South Caroling	Integrated Delivery Systems and Physician-hospital Organizations	Decreased costs by $10 per member per month, and decreased medical costs by 6.5%	Decreased ER visits by 12.4%-29%, decreased LOS by 24%-36%, decreased admissions by 16%
Correia, 2011	Throughout the United States	Physician Hospital Organization versus smaller ACOs	Larger organizations could lose $500 per beneficiary, smaller ones could lose $1000	Not assessed